ne don't don't de s

73 ij LA 

≘

ļ. . :

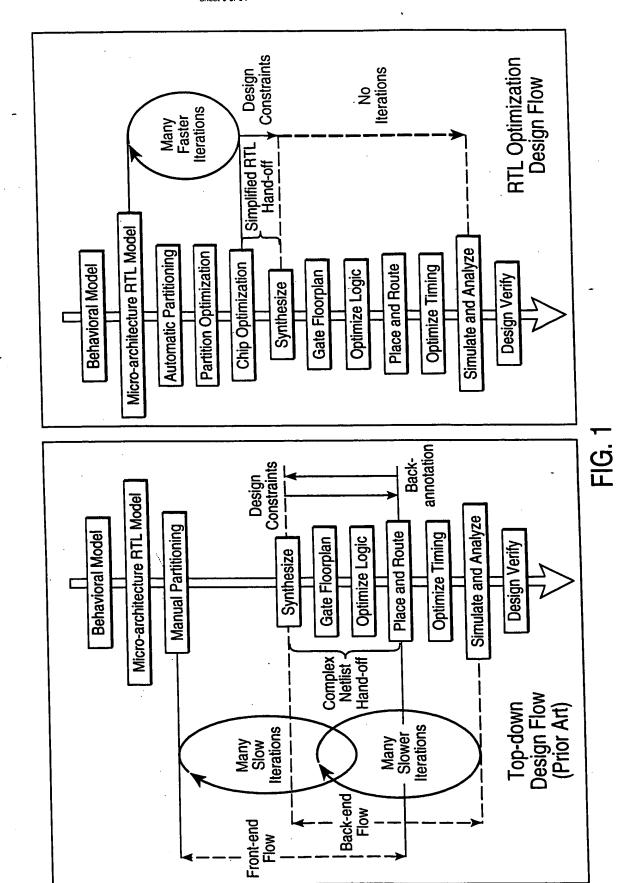
Then there that the

Express Mail No. EL734639304US Title:

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625 Sheet 1 of 14

DESIGN USING PLACEMENT-BASED INFORMATION



ļ.L

1.1

10

æ

ļ., i.

fu

fIJ

10

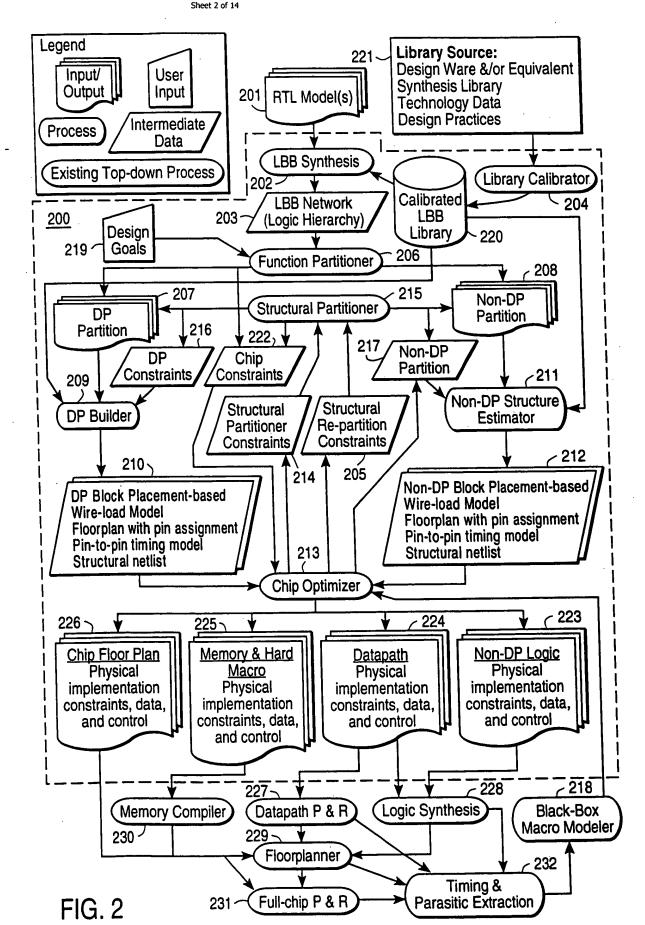
å.i



Express Mail No. EL734639304US

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS
FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC
DESIGN USING PLACEMENT-BASED INFORMATION

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625



APPROVEL O.G. FIG.

BY CLASS SUBCLAST

DPAFTSMAN

President days

₽ a≟

Hung flows that

į, i

Express Mail No. EL734639304US

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625

Sheet 3 of 14

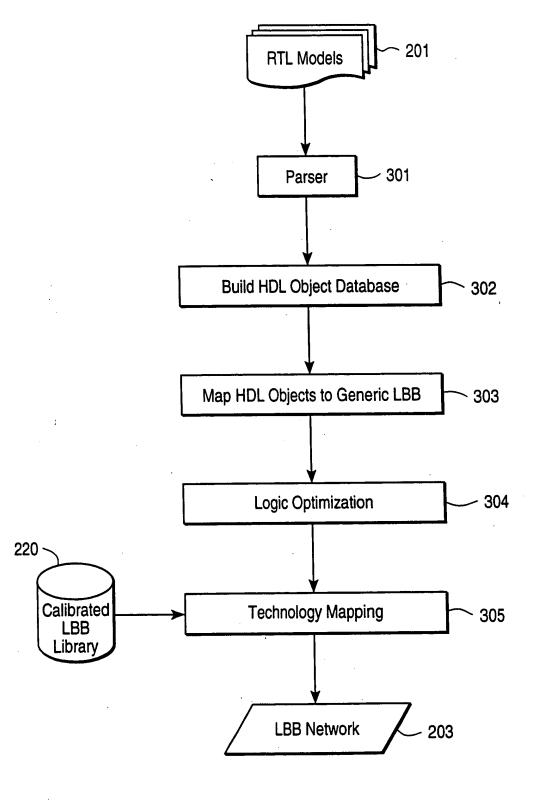


FIG. 3

ļ, iž

£13

13

Ĺij

Į.

Į, i

fu

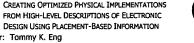
f Lij

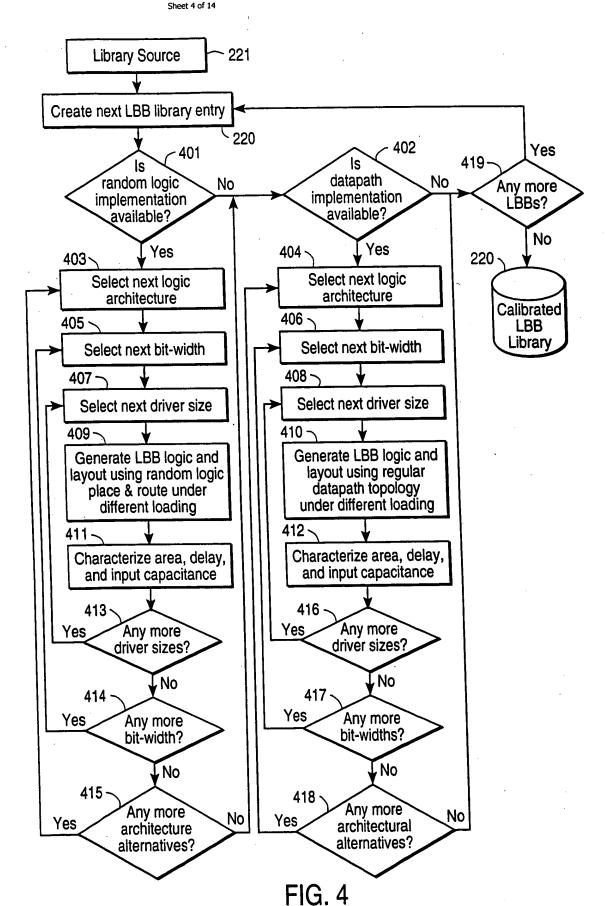
£ij 

į.;

Express Mail No. EL734639304US CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625







£ij.

111

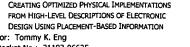
Į. fu F.

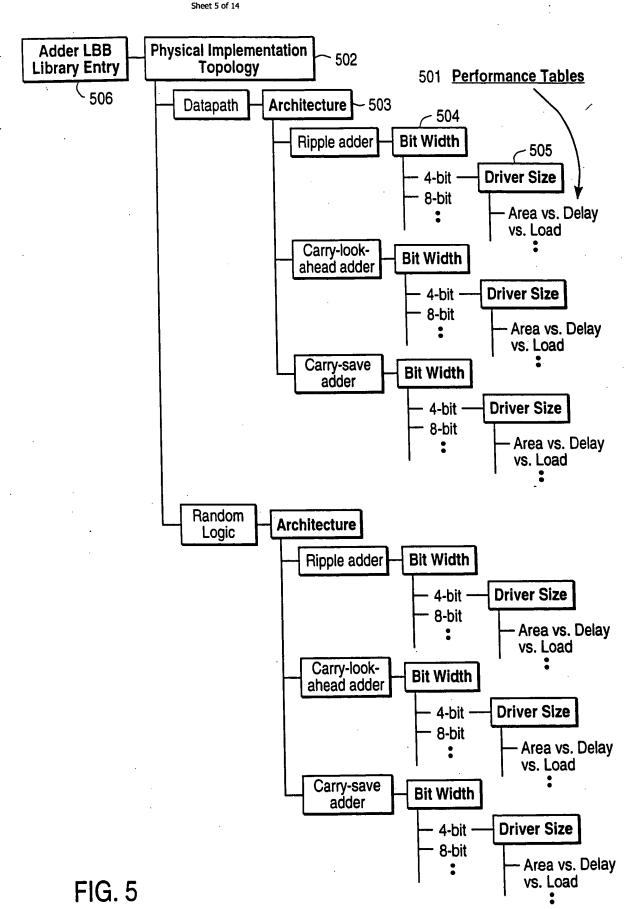
10

Express Mail No. EL734639304US

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625





all that that a fact that call

Express Mail No. EL734639304US

Title: CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625

Sheet 6 of 14



Category	LBB
Adder	Adder, AdderCi, AdderCiCo, AdderCo
Arithmetic	ALU, Modulus, Multiplier, Divider, UnaryMinus
Buffers	Buffer, TriStateBuf
Comparator	Equal, Greater, GreaterOrEqual, Less, LessOrEqual, NotEqual
Complex Logic	Finite State Machine, Hard Macros
Decoder	BinaryDecoder
Decrementer	Decrementer, DecrementerCi, DecrementerCiCo, DecrementerCo
Encoder	BinaryEncoder, PriorityEncoder
Incrementer	Incrementer, IncrementerCi, IncrementerCiCo, IncrementerCo
Logic Gates	And, Nand, Nor, Or, Xnor, Xor, Inverter, And-Or (AO), And-Or-Invert (AOI)
Memory	RAM, ROM, Register File
Mux	Mux, PriorityMux, UnencodedMux (AOI), InvMux, InvPriorityMux, InvUnencodedMux
Reduce Gates	ReduceAnd, ReduceNand, ReduceNor, ReduceOr, ReduceXnor, ReduceXor
Shift	ArithmeticShift, CircularLeftShift, CircularRightShift, ShiftLeft, ShiftRight
Storage	Latch, FlipFlop
Subtractor	Subtractor, SubtractorCi, SubtractorCiCo, SubtractorCo

Ē : h

43

[]

[]

10

LII

fij

1.4

PU

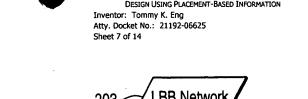
F.J

13

11

Express Mail No. EL734639304US

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION



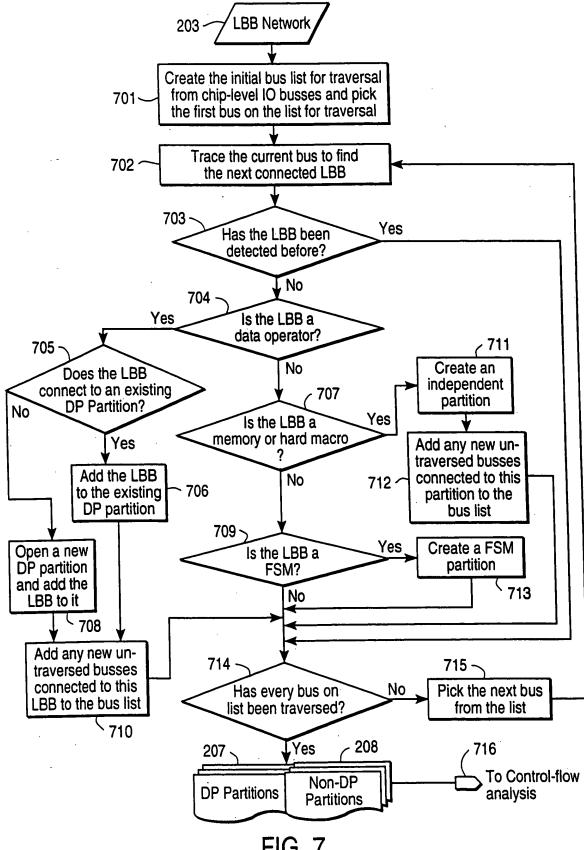


FIG. 7

į., i.

13

[]

1,1

£Ó fij

ğ ılı

71

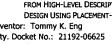
fu

10 [] å.k

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC

DESIGN USING PLACEMENT-BASED INFORMATION

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625 Sheet 8 of 14



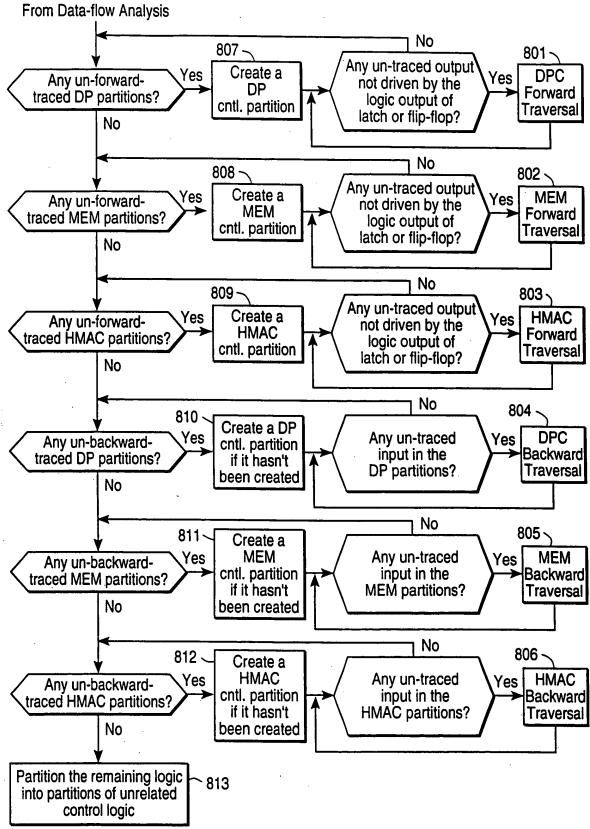


FIG. 8

ja sh

Hard than the

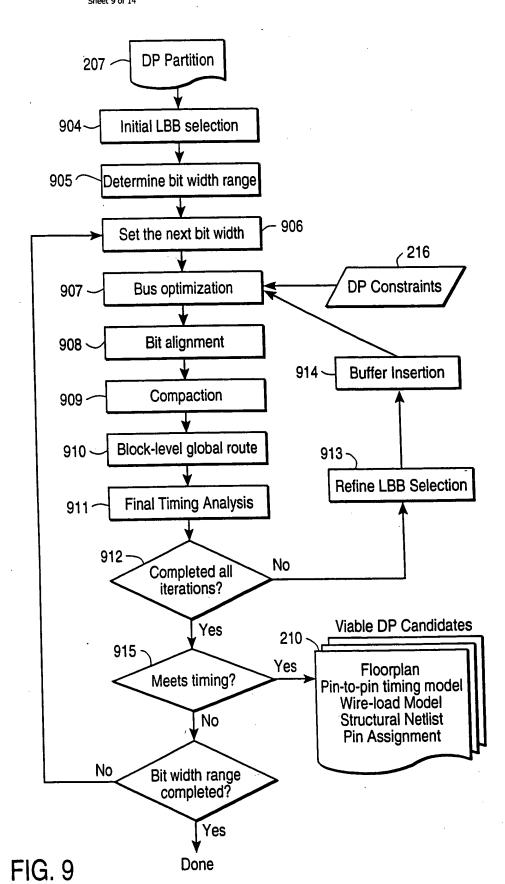
'H'' 12

Hart Wall Buff

Express Mail No. EL734639304US
Title: CREATING OPTIMIZED PHYSICAL IMPLE

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625 Sheet 9 of 14



APPROVED CLASO SUBCLA. ΒY DRAFTSMAN

> 11 £.]

£#

ļ., fļ

fij

ťü

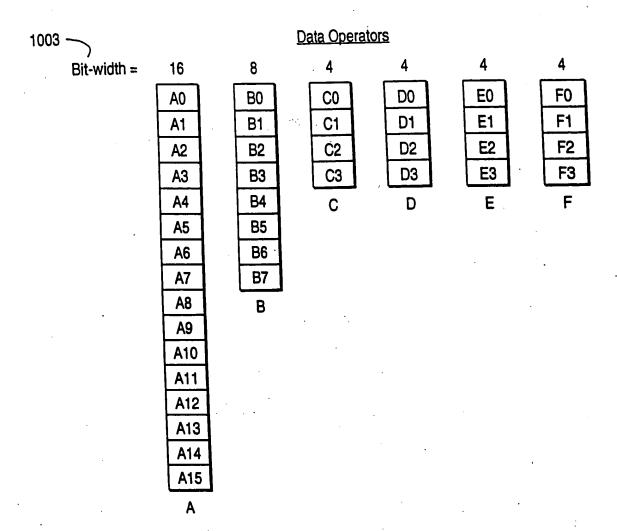
Express Mail No. EL734639304US

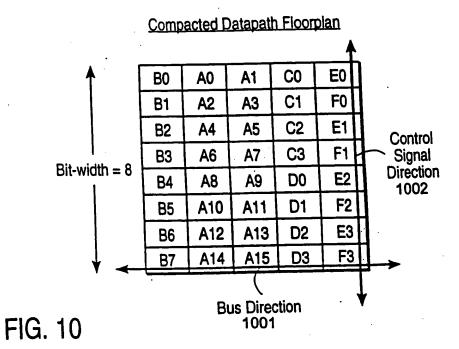
CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625

DESIGN USING PLACEMENT-BASED INFORMATION

Sheet 10 of 14





H ah

the trans of the transfer of t

then then the state of the settle

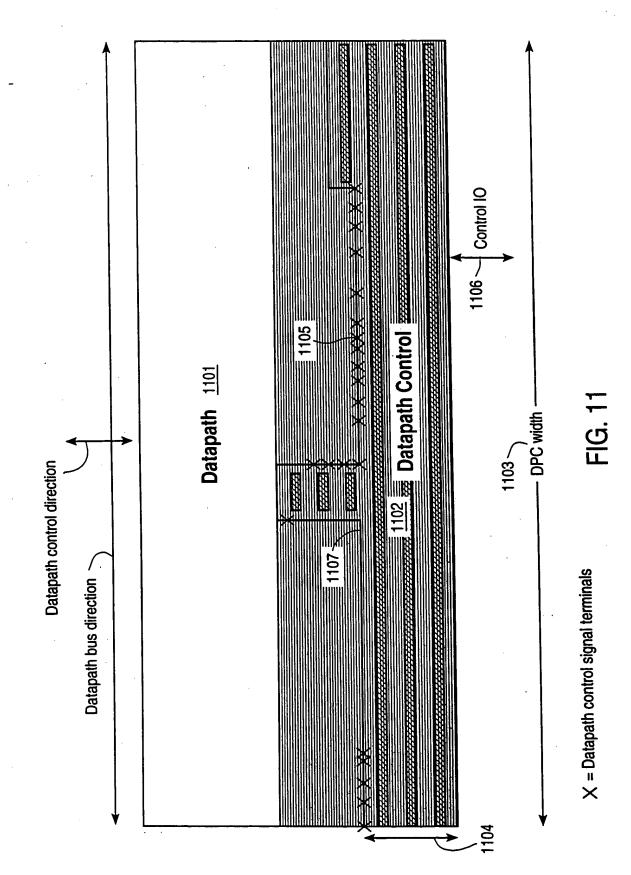
Express Mail No. EL734639304US

e: CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION

DESIGN USING PLACEMENT-BASED INFORMATION
Inventor: Tommy K. Eng
Atty. Docket No.: 21192-06625
Sheet 11 of 14

LEMENTATIONS

ELECTRONIC
NEORMATION



ļ., 13

===

£., Ĩij 711

į.i. 

Home that their t

Express Mail No. EL734639304US

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625

Sheet 12 of 14

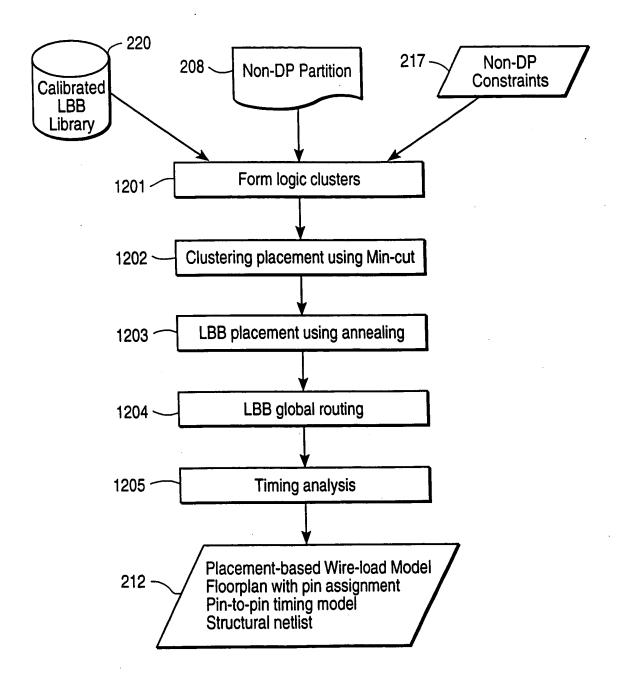


FIG. 12

14

[]

# 6 m

1.1

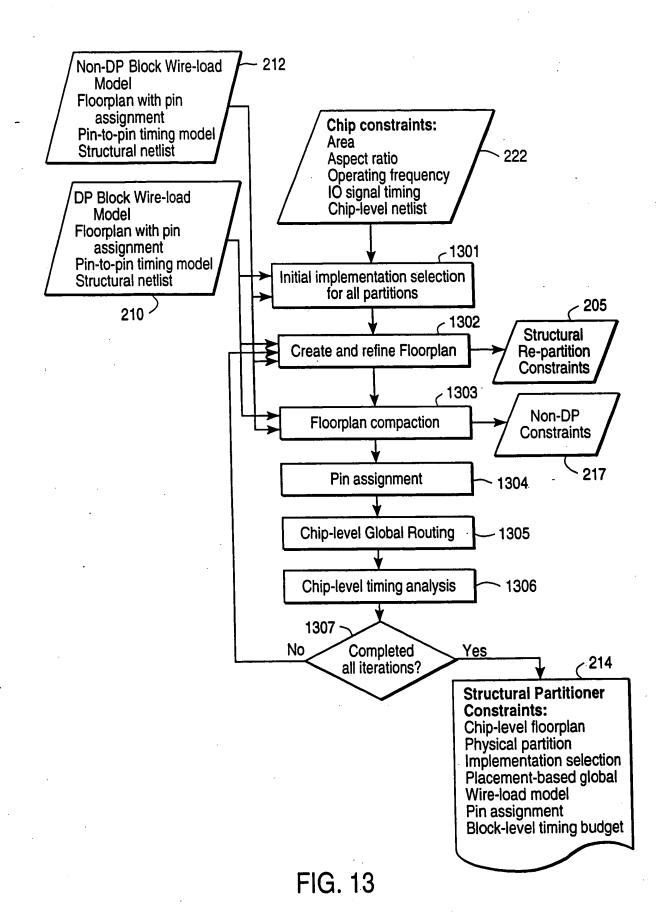
[0

M

Express Mail No. EL734639304US

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625 Sheet 13 of 14 ONS CIC N



dern B. Brite dern gent H. B. dern dern

Just mad thus

1

fij

Burn Nach Hadi

ļ.:



Express Mail No. EL734639304US

CREATING OPTIMIZED PHYSICAL IMPLEMENTATIONS FROM HIGH-LEVEL DESCRIPTIONS OF ELECTRONIC DESIGN USING PLACEMENT-BASED INFORMATION

Inventor: Tommy K. Eng Atty. Docket No.: 21192-06625 Sheet 14 of 14



